What is claimed is:

1. A logging tool for a borehole, the borehole having an interior wall, the tool comprising:

a tool body adapted to be inserted into the borehole; and

a radial sensing device coupled to the tool body, the radial sensing device adapted to measure the flow velocity of conductive fluid entering or leaving the borehole interior wall, the radial sensing device being adapted to make the conductive fluid flow velocity measurements proximate the borehole wall.

2. The logging tool according to Claim 1, wherein the radial sensing device comprises a spring-loaded sensor loop, the sensor loop being adapted to exert outward pressure to maintain contact of the sensor loop substantially flush with the borehole interior wall while the tool traverses the borehole.

3. The logging tool according to Claim 2, wherein the sensor loop includes a spring disposed within the sensor loop.

4. The logging tool according to Claim 3, wherein the sensor loop is adapted to be positioned at a non-perpendicular angle with respect to the borehole central axis.

5. The logging tool according to Claim 4, wherein the sensor loop angle is between 10 to 80 degrees with respect to the borehole central axis.

6. The logging tool according to Claim 2, wherein the sensor loop is a continuous ring, wherein the inflow or outflow of conductive fluid is detectable along the circumference of the sensor loop.

7. The logging tool according to Claim 6, wherein the sensor loop includes a plurality of sensors adapted to sense the flow of conductive fluid over the sensor loop.

8. The logging tool according to Claim 6 wherein the sensor loop comprises:

a first coil of wire adapted to generate a magnetic field just outside the sensor loop;

a second coil of wire adapted to generate a magnetic field just outside the sensor loop;

a ferromagnetic material disposed between the two coils;

a plurality of resistors disposed along the sensor loop;

a plurality of electrodes, each one of the electrodes coupled between two adjacent resistors along the loop circumference; and

a voltage measuring mechanism electrically coupled between two of the resistors.

9. The logging tool according to Claim 2 wherein the sensor loop is adapted to operate within a plurality of different diameter casings within a single well.

10. The logging tool according to Claim 9, wherein the sensor loop is coupled to the tool body at a loop high point and a loop low point, the loop high point and loop low point being about 180 degrees apart along the sensor loop.

11. The logging tool according to Claim 10, further comprising:

a first side arm coupled to the loop high point, the first side arm being flush to the borehole wall; and

a second side arm coupled to the loop low point, the second side arm being flush to the borehole wall and being 180 degrees apart from the first side arm, the first and second side arms adapted to hold the upper and lower end of the sensor loop, respectively, against the borehole inner wall.

12. The logging tool according to Claim 11, wherein the tool body is positioned in a plane, wherein the first and second side arms are positioned in the tool body plane.

13. The logging tool according to Claim 11, further comprising:

a force arm coupled between each end of the first and second side arms and the tool body, wherein the force arms, side arms and tool body lie in a common plane.

14. The logging tool according to Claim 13 wherein the force arms at one end of the tool are axially fixed to the tool body, and the force arms at the other end of the tool are axially movable along the tool body.

15. The logging tool according to Claim 14 wherein the tool body includes a slit, wherein the moveable force arms are coupled to the tool body via the slit to enable the tool to accommodate different diameter casings.

16. The logging tool according to Claim 11 wherein the side arms include a sloped recessed interval to accommodate the width of the sensor loop.

17. The logging tool according to Claim 1, wherein the radial sensing device is insensitive to the flow of nonconductive fluid.

18. The logging tool according to Claim 1, wherein the conductive fluid is water, wherein the radial sensing device is insensitive to the flow of water inside a central region of the borehole.

19. A fluid flow measuring device, comprising:

a plurality of resistors disposed in a circular pattern;

a plurality of electrodes, each electrode coupled between two adjacent resistors;

a first coil of wire adapted to generate a magnetic field wound proximate the resistors and electrodes;

a second coil of wire adapted to generate a magnetic field wound proximate the resistors and electrodes; and

a voltage measuring mechanism electrically coupled between two of the resistors, wherein a flow of conductive fluid is detectable by measuring the voltage.

20. The fluid flow measuring device according to Claim 19, further comprising a ferromagnetic material disposed between the two coils.

21. The fluid flow measuring device according to Claim 19, wherein at least the resistors and electrodes are mounted on a sensor loop, the sensor loop being spring-loaded and being adapted to exert outward pressure to maintain contact of the sensor loop substantially flush with a borehole interior wall.

22. The fluid flow measuring device according to Claim 19, further comprising:

means for maintaining flush contact of the sensor loop with a borehole interior wall over a range of borehole casing diameters.

23. A method of measuring lateral fluid flow in a borehole, comprising:

traversing the borehole with a tool body having a sensor loop attached thereto, wherein the sensor loop is adapted to directly measure the flow velocity of conductive fluid entering or leaving the borehole interior wall.

24. The method according to Claim 23, further comprising the sensor loop maintaining in flush contact with the interior wall of the borehole.

25. The method according to Claim 24, further comprising the sensor loop adjusting to a range of diameters of casings within the borehole.

26. The method according to Claim 25, further comprising the sensor loop adapting to the borehole diameter range by changing the angle of the sensor loop with respect to the central axis of the borehole.

27. The method according to Claim 23 wherein each portion of the borehole being measured for conductive fluid flow is traversed only twice.

28. The method according to Claim 23 wherein the conductive fluid comprises water.

29. The method according to Claim 23, wherein directly measuring the flow velocity comprises:

generating a magnetic field proximate the sensor loop; and

measuring the voltage between electrodes positioned at intervals along the sensor loop.